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NEWS 2	Jan 25	BLAST(R) searching in REGISTRY available in STN on the Web
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NEWS 4	Feb 01	DKILIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS 5	Feb 19	Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6	Mar 08	Gene Names now available in BIOSIS
NEWS 7	Mar 22	TOXLIT no longer available
NEWS 8	Mar 22	TRCTHERMO no longer available
NEWS 9	Mar 28	US Provisional Priorities searched with P in CA/CAplus and USPATFULL
NEWS 10	Mar 28	LIPINSKI/CALC added for property searching in REGISTRY
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NEWS 14	Apr 09	ZDB will be removed from STN
NEWS 15	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 16	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 17	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 18	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 19	Jun 03	New e-mail delivery for search results now available
NEWS 20	Jun 10	MEDLINE Reload
NEWS 21	Jun 10	PCTFULL has been reloaded

NEWS EXPRESS	February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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NEWS LOGIN	Welcome Banner and News Items
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FILE 'HOME' ENTERED AT 17:32:14 ON 21 JUN 2002

=> file medline, biosis

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FULL ESTIMATED COST	0.21	0.21

FILE 'MEDLINE' ENTERED AT 17:32:44 ON 21 JUN 2002

FILE 'BIOSIS' ENTERED AT 17:32:44 ON 21 JUN 2002

=> s INGAP

L1 20 INGAP

=> d l1 ti abs ibib tot

L1 ANSWER 1 OF 20 MEDLINE

TI Islet-neogenesis-associated protein enhances neurite outgrowth from DRG neurons.

AB Islet-neogenesis-associated protein, **INGAP**, is a 175-amino-acid pancreatic acinar protein that stimulates pancreatic duct cell proliferation in vitro and islet neogenesis in vivo. To date, the mitogenic activity of **INGAP** has been identified only in nonneural tissues. The aim of this study was to examine the effects of a pentadecapeptide of **INGAP** (**INGAP** peptide), the biologically active portion of the native protein, in cultured dorsal root ganglia (DRG) explants from C57BL/6 mice. The present study provides evidence that **INGAP** peptide acts as a mitogen in the peripheral nervous system (PNS), and that it enhances neurite outgrowth from DRGs in vitro in a time- and dose-dependent manner. The neuritogenic action of **INGAP** peptide correlates with an increase in [(3)H]thymidine incorporation ($P < 0.0001$) and mitochondrial activity ($P < 0.001$). Results from these studies suggest that **INGAP** peptide promotes Schwann cell proliferation in the DRG which releases trophic factors that promote neurite outgrowth.

ACCESSION NUMBER: 2002141663 MEDLINE
DOCUMENT NUMBER: 21845459 PubMed ID: 11855839
TITLE: Islet-neogenesis-associated protein enhances neurite outgrowth from DRG neurons.
AUTHOR: Tam Joseph; Rosenberg Lawrence; Maysinger Dusica
CORPORATE SOURCE: Department of Pharmacology and Therapeutics, Department of Surgery, McGill University, 3655 Promenade Sir-William-Osler, Montreal, Quebec, H3G 1Y6, Canada.
SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (2002 Mar 1) 291 (3) 649-54.
Journal code: 0372516. ISSN: 0006-291X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200204

ENTRY DATE: Entered STN: 20020307
Last Updated on STN: 20020403
Entered Medline: 20020401

L1 ANSWER 2 OF 20 MEDLINE
TI Diffraction anomalous fine structure of forbidden reflection of super-ordered GaInP.
AB We used DAFS to probe super-ordered domains in **InGaP**/GaAs epitaxial growth. The sample was lattice matched **InGaP** epitaxially grown on GaAs with a substrate miscut angle of 6 degrees with respect to the (001) direction. **InGaP** epi-layer exhibited (111)-type alloy ordering, of alternating InP and GaP like planes and giving rise to a (-5/2,5/2,-5/2) Bragg peak reflection which becomes allowed. Structural data can be extracted, at the same time, for the surroundings of Gallium in the bulk and in the epi-layer from allowed reflections, while the forbidden reflection gives structural details around Gallium in the ordered domains. Difference with the bulk **InGaP** Fourier transform confirms the symmetry selectivity of chosen reflections for the super-ordered domains.
ACCESSION NUMBER: 2001467296 MEDLINE
DOCUMENT NUMBER: 21403700 PubMed ID: 11512789
TITLE: Diffraction anomalous fine structure of forbidden reflection of super-ordered GaInP.
AUTHOR: Alagna L; Turchini S; Prosperi T
CORPORATE SOURCE: Istituto di Chimica dei Materiali, CNR, Area della Ricerca di Roma, Italy.. ala@mlib.cnr.it
SOURCE: J Synchrotron Radiat, (2001 Mar 1) 8 (Pt 2) 387-9. Journal code: 9888878. ISSN: 0909-0495.
PUB. COUNTRY: Denmark
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
ENTRY MONTH: 200109
ENTRY DATE: Entered STN: 20010830
Last Updated on STN: 20010910
Entered Medline: 20010906

L1 ANSWER 3 OF 20 MEDLINE
TI ARIP cells as a model for pancreatic beta cell growth and development.
AB Pancreatic ductal epithelium contains the pluripotent cells that develop into pancreatic beta cells. However, little is known about intrinsic or extrinsic factors that enable this differentiation to occur. PDX-1 plays a critical role in pancreatic development and insulin secretion. Therefore we transfected the PDX-1 gene into ARIP cells, a rat pancreatic ductal cell line. The ARIP and ARIP/PDX-1 cells were treated with known growth and differentiation factors including hepatocyte growth factor, activin A, betacellulin, reg, **INGAP**, nicotinamide, and retinoic acid. Despite the ductal origin of these cells, no changes in expression of 24 pancreatic genes, as determined by semiquantitative reverse transcription-polymerase chain reaction (RT-PCR), occurred in either cell line. Western blot analysis confirmed the presence of the active phosphorylated form of the PDX-1 protein. To enhance PDX-1 phosphorylation, we cultured ARIP and ARIP/PDX-1 cells in a high-glucose medium; however, as with the other conditions, no differences in mRNA expression were noted on the RT-PCR assay. We conclude that other factors may be necessary for beta cell differentiation and/or that ARIP cells are a poor model of pancreatic development.
ACCESSION NUMBER: 2001322734 MEDLINE
DOCUMENT NUMBER: 21144272 PubMed ID: 11249068
TITLE: ARIP cells as a model for pancreatic beta cell growth and development.
AUTHOR: Silver K; Yao F
CORPORATE SOURCE: University of Maryland School of Medicine, Division of

Endocrinology, Diabetes and Nutrition, Baltimore 21201, USA. ksilver@medicine.umaryland.edu
CONTRACT NUMBER: 3-[redacted]-RR2719-11S3 (NCRR)
SOURCE: PANCREAS, (2001 Mar) 22 (2) 141-7.
Journal code: 8608542. ISSN: 0885-3177.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200106
ENTRY DATE: Entered STN: 20010611
Last Updated on STN: 20010611
Entered Medline: 20010607

L1 ANSWER 4 OF 20 MEDLINE
TI Near-field mapping of the emission distribution in semiconductor microdiscs.
AB We have used a scanning near-field optical microscope to study the fluorescent light distribution in the near- and far-fields with two types of microdiscs, **InGaP** and GaN, fabricated in our laboratory. The **InGaP** microdisc has a radius of 2.5-5.0 microm, a thickness of 0.15-0.2 microm and a circular shape and the GaN disc has a radius of 5-8 microm with a thickness of 0.5-2 microm. Spontaneous emission enhancement in these microdiscs has been observed with emitting wavelengths of 650 and 550 nm respectively In both types of microdisc, the whispering-gallery mode (WCM) has been observed on the top surface using near-field optical and far-field microscopic methods. However, due to the different disc structures and optical confinements, the light distributions of the type types of disc are quite different. In the case of the **InGaP** disc, WGM is the dominant mode with a mixture of other modes. Interference-like ring intensities have been observed both inside the disc surface and outside, with a period ratio of 1:2. In addition, the propagating waves emitted from the side of the disc have been collected for the first time by using near-field optical microscopy. A theoretical calculation based on the theory of optical modes in microdisc lasers confirmed this observation. It also predicted the behaviour of the electric field distribution (transverse electric) inside and outside the disc, as well as the period of the wave propagation. In contrast, the near-field mapping of the GaN fluorescence showed not only a ring-like emission intensity along the circumference of the disc, an indication of WGM, but also an even intensity distribution inside the disc. This can be explained as the combination of the WGM with the Fabry-Perot mode of multi-reflection between the GaN layer and the substrate. The results also demonstrate the potential application of near-field optics to explore the light emission mode of a microdisc on a nanometre scale.
ACCESSION NUMBER: 2001314940 MEDLINE
DOCUMENT NUMBER: 21281503 PubMed ID: 11388282
TITLE: Near-field mapping of the emission distribution in semiconductor microdiscs.
AUTHOR: Zhu X; Zhang Y; Xin Y; Wang G; Wang R; Ling Y; Zhou H; Yin Y; Zhang B; Dai L; Zhang G; Gan Z
CORPORATE SOURCE: Department of Physics, Peking University, Beijing, China.. zhuxing@ws1.bimp.pku.edu.cn
SOURCE: JOURNAL OF MICROSCOPY, (1999 May-Jun) 194 (Pts 2-3) 439-44.
Journal code: 0204522. ISSN: 0022-2720.
PUB. COUNTRY: England: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
ENTRY MONTH: 200107
ENTRY DATE: Entered STN: 20010723

Last Updated on STN: 20010723
Entered Medline: 20010719

L1 ANSWER 5 OF 20 MEDLINE
TI Development of pancreatic islets (review).
AB Recent studies have revealed that islet cells differentiate from the epithelial cells of primitive pancreatic ducts during embryogenesis, and can regenerate in response to the loss of islet cells even in adult pancreas. The ability of islet cells to regenerate raises the possibility that impaired and decreased islets of diabetic patients can be restored. In this review, factors regulating islet development including differentiation factors (Shh, activin, follistatin, and TGF alpha), transcriptional factors (PDX1, Isl1, Pax4, Pax6, Nkx2.2, Nkx6.1, BETA2, and HNF), growth factors (the EGF family, HGF, IGF-I, IGF-II, Reg, **INGAP**, PDGF, FGF, VEGF, and NGF), hormones (insulin, the GH family, PTHrP, TRH, and gastrin), and cell adhesion molecules (N-CAM and cadherins) are described after a short introduction and an outline of pancreatic development.
ACCESSION NUMBER: 2000494222 MEDLINE
DOCUMENT NUMBER: 20465722 PubMed ID: 10028048
TITLE: Development of pancreatic islets (review).
AUTHOR: Yamaoka T; Itakura M
CORPORATE SOURCE: Otsuka Department of Clinical and Molecular Nutrition, School of Medicine, The University of Tokushima, Tokushima 770-8503, Japan.
SOURCE: INTERNATIONAL JOURNAL OF MOLECULAR MEDICINE, (1999 Mar) 3 (3) 247-61. Ref: 262
Journal code: 9810955. ISSN: 1107-3756.
PUB. COUNTRY: Greece
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200010
ENTRY DATE: Entered STN: 20001027
Last Updated on STN: 20001027
Entered Medline: 20001013

L1 ANSWER 6 OF 20 MEDLINE
TI Possible relationship between changes in islet neogenesis and islet neogenesis-associated protein-positive cell mass induced by sucrose administration to normal hamsters.
AB The possible relationship between changes in islet cell mass and in islet neogenesis-associated protein (**INGAP**)-cell mass induced by sucrose administration to normal hamsters was investigated. Normal hamsters were given sucrose (10% in drinking water) for 5 (S8) or 21 (S24) weeks and compared with control (C) fed hamsters. Serum glucose and insulin levels were measured and quantitative immunocytochemistry of the endocrine pancreas was performed. Serum glucose levels were comparable among the groups, while insulin levels were higher in S hamsters. There was a significant increase in beta-cell mass ($P<0.02$) and in beta-cell 5-bromo-2'-deoxyuridine index ($P<0.01$), and a significant decrease in islet volume ($P<0.01$) only in S8 vs C8 hamsters. Cytokeratin (CK)-labelled cells were detected only in S8 hamsters. **INGAP**-positive cell mass was significantly larger only in S8 vs C8 hamsters. Endocrine **INGAP**-positive cells were located at the islet periphery (approximately 96%), spread within the exocrine pancreas (approximately 3%), and in ductal cells (<1%) in all groups. **INGAP** positivity and glucagon co-localization varied according to topographic location and type of treatment. In C8 hamsters, 49.1+/-6. 9% cells were **INGAP** - and glucagon-positive in the islets, while this percentage decreased by

almost half in endocrine extra-insular and ductal cells. In S8 animals, co-expression increased in endocrine extra-insular cells to 36.3+/-9.5%, with similar figure in the islets, decreasing to 1[redacted]+/-6.9% in ductal cells. **INGAP**-positive cells located at the islet periphery also co-expressed CK. In conclusion, a significant increase of **INGAP** -positive cell mass was only observed at 8 weeks when neogenesis was present, suggesting that this peptide might participate in the control of islet neogenesis. Thus, **INGAP** could be a potentially useful tool to treat conditions in which there is a decrease in beta-cell mass.

ACCESSION NUMBER: 2000413865 MEDLINE
DOCUMENT NUMBER: 20291190 PubMed ID: 10828857
TITLE: Possible relationship between changes in islet neogenesis and islet neogenesis-associated protein-positive cell mass induced by sucrose administration to normal hamsters.
AUTHOR: Del Zotto H; Massa L; Rafaeloff R; Pittenger G L; Vinik A; Gold G; Reifel-Miller A; Gagliardino J J
CORPORATE SOURCE: CENEXA - Center of Experimental and Applied Endocrinology (UNLP-CONICET, WHO Collaborating Center), University of La Plata School of Medicine, La Plata, Argentina.
SOURCE: JOURNAL OF ENDOCRINOLOGY, (2000 Jun) 165 (3) 725-33.
Journal code: 0375363. ISSN: 0022-0795.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000907
Last Updated on STN: 20000907
Entered Medline: 20000829

L1 ANSWER 7 OF 20 MEDLINE
TI Molecular cloning and tissue-specific expression of a new member of the regenerating protein family, islet neogenesis-associated protein-related protein.
AB Islet neogenesis-associated protein (**INGAP**) is a protein expressed during islet neogenesis. We have cloned a novel cDNA having a similar sequence to **INGAP** cDNA. The cDNA encodes 175 amino acids designated **INGAP**-related protein (INGAPrP). **INGAP** is expressed in cellophane-wrapped pancreas, but not in normal pancreas, whereas INGAPrP was abundantly expressed in normal pancreas.

ACCESSION NUMBER: 2000033449 MEDLINE
DOCUMENT NUMBER: 20033449 PubMed ID: 10564727
TITLE: Molecular cloning and tissue-specific expression of a new member of the regenerating protein family, islet neogenesis-associated protein-related protein.
AUTHOR: Sasahara K; Yamaoka T; Moritani M; Yoshimoto K; Kuroda Y; Itakura M
CORPORATE SOURCE: Department of Pediatrics, School of Medicine, The University of Tokushima, Tokushima, Japan.
SOURCE: BIOCHIMICA ET BIOPHYSICA ACTA, (2000 Jan 3) 1500 (1) 142-6.
Journal code: 0217513. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AB028625
ENTRY MONTH: 200001
ENTRY DATE: Entered STN: 20000124
Last Updated on STN: 20000124
Entered Medline: 20000111

L1 ANSWER 8 OF 20 MEDLINE
TI Induction of islet cell neogenesis in the adult pancreas: the partial duct

obstruction model.

AB The proliferative capacity of adult pancreatic islet cells is limited, although the formation of new islets from cells associated with the ductal epithelium is achievable even in the adult gland. Understanding the mechanism whereby proliferation and subsequent differentiation of putative precursor cells leads the appearance of new islets, i.e., islet neogenesis, may be important as a modality for treatment of both Type I and type II diabetes, in which there is an absolute or relative deficiency of insulin. It appears that certain genes and their protein products are essential to the initiation of the initial step in the pathway. We have shown that partial obstruction of the hamster pancreas is able to reverse streptozotocin-induced diabetes more than 50% of the time. An extract, termed ilotropin, prepared from obstructed pancreata, also reverses the diabetes, whereas extracts of control non-obstructed pancreata do not. Ilotropin contains a protein that is heat and acid stable with MW around 20-45 kDa that is capable of stimulating the proliferation of isolated duct cells in culture. Using mRNA and a differential display technique, 20 genes were found to be expressed in the partially obstructed (regenerating), but not the non-obstructed (non-regenerating) pancreas. One of these islet neogenesis-associated proteins (**INGAP**) proved to be unique to the obstructed pancreas, and a peptide contained within the sequence was capable of stimulating the proliferation of ductal cells in culture. **INGAP** was found to be expressed early in the neogenic process before the onset of ductal cell proliferation, and was capable of stimulating tritiated thymidine uptake into protodifferentiated epithelial cells, compatible with the notion that it might be involved in initiating the process of islet neogenesis.

ACCESSION NUMBER: 1999065227 MEDLINE
DOCUMENT NUMBER: 99065227 PubMed ID: 9849975
TITLE: Induction of islet cell neogenesis in the adult pancreas: the partial duct obstruction model.
AUTHOR: Rosenberg L
CORPORATE SOURCE: Montreal General Hospital Research Institute, and Department of Surgery, McGill University, Quebec, Canada.
SOURCE: MICROSCOPY RESEARCH AND TECHNIQUE, (1998 Nov 15) 43 (4) 337-46. Ref: 75
Journal code: 9203012. ISSN: 1059-910X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199902
ENTRY DATE: Entered STN: 19990311
Last Updated on STN: 19990311
Entered Medline: 19990219

L1 ANSWER 9 OF 20 MEDLINE

TI Cloning and sequencing of the pancreatic islet neogenesis associated protein (**INGAP**) gene and its expression in islet neogenesis in hamsters.

AB Induction of islet neogenesis by cellophane wrapping (CW) reverses streptozotocin-induced (STZ) diabetes. Administration of Ilotropin, a protein extract isolated from CW pancreata, causes recapitulation of normal islet ontogeny and reverses STZ diabetes, reducing mortality by 50%. We investigated the hypothesis that a novel gene encoding a constituent of Ilotropin was expressed in the hamster pancreas undergoing islet neogenesis. Islet neogenesis associated protein (**INGAP**) is

a product of a novel gene expressed in regenerating hamster pancreas. Northern blot analysis showed a strong single transcript of 850 bp at 1 and 2 d after CW [redacted] disappeared by the 6th day and was absent from untreated control pancreata. **INGAP** gene is expressed in acinar cells, but not in islets. Western blot analysis demonstrated the presence of **INGAP** in Ilotropin but not in extracts from control pancreata. A synthetic pentadecapeptide, corresponding to a region unique to **INGAP**, stimulated a 2.4-fold increase in [3H]thymidine incorporation into hamster duct epithelium in primary culture and a rat pancreatic duct cell line but had no effect on a hamster insulinoma tumor cell line. A portion of human **INGAP** gene was cloned and appears to be highly homologous to the hamster gene. This data suggests that the **INGAP** gene is a novel pancreatic gene expressed during islet neogenesis whose protein product is a constituent of Ilotropin and is capable of initiating duct cell proliferation, a prerequisite for islet neogenesis.

ACCESSION NUMBER: 97296198 MEDLINE
DOCUMENT NUMBER: 97296198 PubMed ID: 9151782
TITLE: Cloning and sequencing of the pancreatic islet neogenesis associated protein (**INGAP**) gene and its expression in islet neogenesis in hamsters.
AUTHOR: Rafaeloff R; Pittenger G L; Barlow S W; Qin X F; Yan B; Rosenberg L; Duguid W P; Vinik A I
CORPORATE SOURCE: Department of Internal Medicine, Eastern Virginia Medical School, Norfolk 23510, USA.
SOURCE: JOURNAL OF CLINICAL INVESTIGATION, (1997 May 1) 99 (9) 2100-9.
Journal code: 7802877. ISSN: 0021-9738.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
OTHER SOURCE: GENBANK-U41737; GENBANK-U41738
ENTRY MONTH: 199706
ENTRY DATE: Entered STN: 19970709
Last Updated on STN: 19970709
Entered Medline: 19970624

L1 ANSWER 10 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Islet-neogenesis-associated protein enhances neurite outgrowth from DRG neurons.
AB Islet-neogenesis-associated protein, **INGAP**, is a 175-amino-acid pancreatic acinar protein that stimulates pancreatic duct cell proliferation in vitro and islet neogenesis in vivo. To date, the mitogenic activity of **INGAP** has been identified only in nonneural tissues. The aim of this study was to examine the effects of a pentadecapeptide of **INGAP** (**INGAP** peptide), the biologically active portion of the native protein, in cultured dorsal root ganglia (DRG) explants from C57BL/6 mice. The present study provides evidence that **INGAP** peptide acts as a mitogen in the peripheral nervous system (PNS), and that it enhances neurite outgrowth from DRGs in vitro in a time- and dose-dependent manner. The neuritogenic action of **INGAP** peptide correlates with an increase in (3H)thymidine incorporation ($P<0.0001$) and mitochondrial activity ($P<0.001$). Results from these studies suggest that **INGAP** peptide promotes Schwann cell proliferation in the DRG which releases trophic factors that promote neurite outgrowth.

ACCESSION NUMBER: 2002:219673 BIOSIS
DOCUMENT NUMBER: PREV200200219673
TITLE: Islet-neogenesis-associated protein enhances neurite outgrowth from DRG neurons.
AUTHOR(S): Tam, Joseph; Rosenberg, Lawrence; Maysinger, Dusica (1)
CORPORATE SOURCE: (1) McGill University, 3655 Promenade Sir-William-Osler,

Room 1314, McIntyre Medical Sciences Building, Montreal, PQ H3G 1Y6: dmaysing@pharma.mcgill.ca Canada
SOURCE: Biochemical and Biophysical Research Communications, (March 1, 2002) Vol. 291, No. 3, pp. 649-654.
http://www.academicpress.com/bbrc. print.
ISSN: 0006-291X.
DOCUMENT TYPE: Article
LANGUAGE: English

L1 ANSWER 11 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI **INGAP** protein involved in pancreatic islet neogenesis.
ACCESSION NUMBER: 2002:127575 BIOSIS
DOCUMENT NUMBER: PREV200200127575
TITLE: **INGAP** protein involved in pancreatic islet neogenesis.
AUTHOR(S): Vinik, A. I; Pittenger, G. L.; Rafaeloff, R.; Rosenberg, L.; Duguid, W. P.
CORPORATE SOURCE: Norfolk, Va. USA
ASSIGNEE: EASTERN VIRGINA MEDICAL SCHOOL OF THE MEDICAL COLLEGE OF HAMPTON ROADS
PATENT INFORMATION: US 5834590 Nov. 10, 1998
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 10, 1998) Vol. 1216, No. 2, pp. 1867.
ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English

L1 ANSWER 12 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI High level of expression of **INGAP** in bacterial and euraryotic cells.
ACCESSION NUMBER: 2002:124017 BIOSIS
DOCUMENT NUMBER: PREV200200124017
TITLE: High level of expression of **INGAP** in bacterial and euraryotic cells.
AUTHOR(S): Vinik, A. I; Pittenger, G. L.; Rafaeloff-Phail, R.; Barlow, S. W.
CORPORATE SOURCE: Norfolk, Va. USA
ASSIGNEE: EASTERN VIRGINIA MEDICAL SCHOOL OF THE MEDICAL COLLEGE OF HAMPTON ROADS
PATENT INFORMATION: US 5804421 Sept. 8, 1998
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Sept. 8, 1998) Vol. 1214, No. 2, pp. 1748.
ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English

L1 ANSWER 13 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI ARIP cells as a model for pancreatic beta cell growth and development.
AB Pancreatic ductal epithelium contains the pluripotent cells that develop into pancreatic beta cells. However, little is known about intrinsic or extrinsic factors that enable this differentiation to occur. PDX-1 plays a critical role in pancreatic development and insulin secretion. Therefore we transfected the PDX-1 gene into ARIP cells, a rat pancreatic ductal cell line. The ARIP and ARIP/PDX-1 cells were treated with known growth and differentiation factors including hepatocyte growth factor, activin A, betacellulin, reg, **INGAP**, nicotinamide, and retinoic acid. Despite the ductal origin of these cells, no changes in expression of 24 pancreatic genes, as determined by semiquantitative reverse

transcription-polymerase chain reaction (RT-PCR), occurred in either cell line. Western blot analysis confirmed the presence of the active phosphorylated form of the PDX-1 protein. To enhance PDX-1 phosphorylation, we cultured ARIP and ARIP/PDX-1 cells in a high-glucose medium; however, as with the other conditions, no differences in mRNA expression were noted on the RT-PCR assay. We conclude that other factors may be necessary for beta cell differentiation and/or that ARIP cells are a poor model of pancreatic development.

ACCESSION NUMBER: 2001:154241 BIOSIS
DOCUMENT NUMBER: PREV200100154241
TITLE: ARIP cells as a model for pancreatic beta cell growth and development.
AUTHOR(S): Silver, Kristi (1); Yao, Flora
CORPORATE SOURCE: (1) University of Maryland School of Medicine, 725 West Lombard Street, Room S-415, Baltimore, MD, 21201: ksilver@medicine.umaryland.edu USA
SOURCE: Pancreas, (March, 2001) Vol. 22, No. 2, pp. 141-147. print.
ISSN: 0885-3177.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L1 ANSWER 14 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Sucrose administration to normal pregnant hamsters induces changes in islet neogenesis-associated protein (**INGAP**): Positive cell mass in the offspring.

ACCESSION NUMBER: 2001:2249 BIOSIS
DOCUMENT NUMBER: PREV200100002249
TITLE: Sucrose administration to normal pregnant hamsters induces changes in islet neogenesis-associated protein (**INGAP**): Positive cell mass in the offspring.
AUTHOR(S): del Zotto, Hector H. (1); Massa, Maria L. (1); Reifel-Miller, Anne; Gold, Gerald; Vinik, Aaron; Gagliardino, Juan J. (1)
CORPORATE SOURCE: (1) CENEXA-Center of Experimental and Applied Endocrinology (UNLP-CONICET, PAHO/WHO Collaborating Center), School of Medicine, National University of La Plata, La Plata, Buenos Aires Argentina
SOURCE: Diabetes Research and Clinical Practice, (September, 2000) Vol. 50, No. Suppl. 1, pp. S144. print.
Meeting Info.: 17th International Diabetes Federation Congress on Diabetes Research and Clinical Practice Mexico-City, Mexico November 05-10, 2000
ISSN: 0168-8227.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L1 ANSWER 15 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Possible relationship between changes in islet neogenesis and islet neogenesis-associated protein-positive cell mass induced by sucrose administration to normal hamsters.
AB The possible relationship between changes in islet cell mass and in islet neogenesis-associated protein (**INGAP**)-cell mass induced by sucrose administration to normal hamsters was investigated. Normal hamsters were given sucrose (10% in drinking water) for 5 (S8) or 21 (S24) weeks and compared with control (C) fed hamsters. Serum glucose and insulin levels were measured and quantitative immunocytochemistry of the endocrine pancreas was performed. Serum glucose levels were comparable among the groups, while insulin levels were higher in S hamsters. There

was a significant increase in beta-cell mass (P<0.02) and in beta-cell 5-bromo-2'-deoxyuridine index (P<0.01), and a significant decrease in islet volume (P<0.[redacted]) only in S8 vs C8 hamsters. Cy[redacted]keratin (CK)-labelled cells were detected only in S8 hamsters. **INGAP**-positive cell mass was significantly larger only in S8 vs C8 hamsters. Endocrine **INGAP**-positive cells were located at the islet periphery (apprx96%), spread within the exocrine pancreas (apprx3%), and in ductal cells (<1%) in all groups. **INGAP** positivity and glucagon co-localization varied according to topographic location and type of treatment. In C8 hamsters, 49.1 +- 6.9% cells were **INGAP**- and glucagon-positive in the islets, while this percentage decreased by almost half in endocrine extra-insular and ductal cells. In S8 animals, co-expression increased in endocrine extra-insular cells to 36.3 +- 9.5%, with similar figures in the islets, decreasing to 19.7 +- 6.9% in ductal cells. **INGAP**-positive cells located at the islet periphery also co-expressed CK. In conclusion, a significant increase of **INGAP** -positive cell mass was only observed at 8 weeks when neogenesis was present, suggesting that this peptide might participate in the control of islet neogenesis. Thus, **INGAP** could be a potentially useful tool to treat conditions in which there is a decrease in beta-cell mass.

ACCESSION NUMBER: 2000:314761 BIOSIS
DOCUMENT NUMBER: PREV200000314761
TITLE: Possible relationship between changes in islet neogenesis and islet neogenesis-associated protein-positive cell mass induced by sucrose administration to normal hamsters.
AUTHOR(S): Del Zotto, H.; Massa, L.; Rafaeloff, R.; Pittenger, G. L.; Vinik, A.; Gold, G.; Reifel-Miller, A.; Gagliardino, J. J. (1)
CORPORATE SOURCE: (1) Facultad de Ciencias Medicas, UNLP, CENEXA (UNLP-CONICET), Calles 60 y 120, 1900, La Plata Argentina
SOURCE: Journal of Endocrinology, (June, 2000) Vol. 165, No. 3, pp. 725-733. print.
ISSN: 0022-0795.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L1 ANSWER 16 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Identification of a novel Reg family gene, Reg IIIdelta, and mapping of all three types of Reg family gene in a 75 kilobase mouse genomic region.
AB Regenerating gene (Reg), first isolated from a regenerating islet cDNA library, encodes a secretory protein with a growth stimulating effect on pancreatic beta cells that ameliorates the diabetes of 90% depancreatized rats and non-obese diabetic mice. Reg and Reg-related genes have been revealed to constitute a multigene family, the Reg family, which consists of three subtypes (types I, II, III) based on the primary structures of the encoded proteins of the genes. We have isolated three types of mouse Reg family gene (Reg I, Reg II, Reg IIIalpha, Reg IIIbeta and Reg IIIgamma) (Unno et al. (1993) J. Biol. Chem. 268, 15974-15 982; Narushima et al. (1997) Gene 185, 159-168). In the present study, by Southern blot analysis of a mouse bacterial artificial chromosome clone containing the five Reg family genes in combination with PCR cloning of every interspace fragment between adjacent genes, the Reg family genes were mapped to a contiguous 75 kb region of the mouse genome according to the following order: 5'-Reg IIIbeta-Reg IIIalpha-Reg II-Reg I-Reg IIIgamma-3'. In the process of ordering the genes, we sequenced the 6.8 kb interspace fragment between Reg IIIbeta and Reg IIIalpha and encountered a novel type III Reg gene, Reg IIIdelta. This gene is divided into six exons spanning about 3 kb, and encodes a 175 amino acid protein with 40-52% identity with the

other five mouse Reg (regenerating gene product) proteins. Reg IIIdelta was expressed predominantly in exocrine pancreas, but not in normal islets, hyperplastic islets, intestine or colon, whereas both Reg I and Reg II were expressed in hyperplastic islets and Reg IIIalpha, Reg IIIbeta and Reg IIIgamma were expressed strongly in the intestinal tract. Possible roles of Reg IIIdelta and the widespread occurrence of the Reg IIIdelta gene in mammalian genomes are discussed.

ACCESSION NUMBER: 2000:305364 BIOSIS
DOCUMENT NUMBER: PREV200000305364
TITLE: Identification of a novel Reg family gene, Reg IIIdelta, and mapping of all three types of Reg family gene in a 75 kilobase mouse genomic region.
AUTHOR(S): Abe, Michiaki; Nata, Koji; Akiyama, Takako; Shervani, Nausheen J.; Kobayashi, Seiichi; Tomioka-Kumagai, Tomoko; Ito, Sadayoshi; Takasawa, Shin; Okamoto, Hiroshi (1)
CORPORATE SOURCE: (1) Department of Biochemistry, Tohoku University Graduate School of Medicine, 2-1 Seiryo-machi, Aoba-ku, Sendai, Miyagi, 980-8575 Japan
SOURCE: Gene (Amsterdam), (April 4, 2000) Vol. 246, No. 1-2, pp. 111-122. print.
ISSN: 0378-1119.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L1 ANSWER 17 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Molecular cloning and tissue-specific expression of a new member of the regenerating protein family, islet neogenesis-associated protein-related protein.
AB Islet neogenesis-associated protein (**INGAP**) is a protein expressed during islet neogenesis. We have cloned a novel cDNA having a similar sequence to **INGAP** cDNA. The cDNA encodes 175 amino acids designated **INGAP**-related protein (INGAPrP). **INGAP** is expressed in cellophane-wrapped pancreas, but not in normal pancreas, whereas INGAPrP was abundantly expressed in normal pancreas.

ACCESSION NUMBER: 2000:60960 BIOSIS
DOCUMENT NUMBER: PREV200000060960
TITLE: Molecular cloning and tissue-specific expression of a new member of the regenerating protein family, islet neogenesis-associated protein-related protein.
AUTHOR(S): Sasahara, Kenji; Yamaoka, Takashi; Moritani, Maki; Yoshimoto, Katsuhiko; Kuroda, Yasuhiro; Itakura, Mitsuo (1)
CORPORATE SOURCE: (1) Otsuka Department of Molecular Nutrition, School of Medicine, University of Tokushima, Tokushima, 770-8503 Japan
SOURCE: Biochimica et Biophysica Acta, (Jan. 3, 2000) Vol. 1500, No. 1, pp. 142-146.
ISSN: 0006-3002.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L1 ANSWER 18 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Sucrose administration to normal hamsters induces simultaneous changes in islet neogenesis and **INGAP**-positive cell mass.

ACCESSION NUMBER: 1999:386975 BIOSIS
DOCUMENT NUMBER: PREV199900386975
TITLE: Sucrose administration to normal hamsters induces simultaneous changes in islet neogenesis and **INGAP** -positive cell mass.
AUTHOR(S): Gagliardino, Juan J. (1); del Zotto, Hector (1); Massa,

Laura (1); Rafaeloff-Phail, Ronit (1); Reifel-Miller, Anne (1); Rosenberg, Gerald (1); Vinik, Aaron I. (1)
CORPORATE SOURCE: (1) [redacted] Plata Argentina
SOURCE: Diabetes, (1999) Vol. 48, No. SUPPL. 1, pp. A442. Meeting Info.: 59th Scientific Sessions of the American Diabetes Association San Diego, California, USA June 19-22,
1999 American Diabetes Association
. ISSN: 0012-1797.
DOCUMENT TYPE: Conference
LANGUAGE: English

L1 ANSWER 19 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI **INGAP** protein involved in pancreatic islet neogenesis.
ACCESSION NUMBER: 1999:71009 BIOSIS
DOCUMENT NUMBER: PREV199900071009
TITLE: **INGAP** protein involved in pancreatic islet neogenesis.
AUTHOR(S): Vinik, A. I; Pittenger, G. L.; Rafaeloff, R.; Rosenberg, L.; Duguid, W. P.
CORPORATE SOURCE: Norfolk, Va. USA
ASSIGNEE: EASTERN VIRGINIA MEDICAL SCHOOL OF THE MEDICINE COLLEGE OF HAMPTON ROADS; MOGILL UNIVERSITY
PATENT INFORMATION: US 5840531 Nov. 24, 1998
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 24, 1998) Vol. 121, No. 4, pp. 3963.
ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English

L1 ANSWER 20 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Cloning and sequencing of the pancreatic islet neogenesis associated protein (**INGAP**) gene and its expression in islet neogenesis in hamsters.
AB Induction of islet neogenesis by cellophane wrapping (CW) reverses streptozotocin-induced (STZ) diabetes. Administration of Ilotropin, a protein extract isolated from CW pancreata, causes recapitulation of normal islet ontogeny and reverses STZ diabetes, reducing mortality by 50%. We investigated the hypothesis that a novel gene encoding a constituent of Ilotropin was expressed in the hamster pancreas undergoing islet neogenesis. Islet neogenesis associated protein (**INGAP**) is a product of a novel gene expressed in regenerating hamster pancreas. Northern blot analysis showed a strong single transcript of 850 bp at 1 and 2 d after CW that disappeared by the 6th day and was absent from untreated control pancreata. **INGAP** gene is expressed in acinar cells, but not in islets. Western blot analysis demonstrated the presence of **INGAP** in Ilotropin but not in extracts from control pancreata. A synthetic pentadecapeptide, corresponding to a region unique to **INGAP**, stimulated a 2.4-fold increase in (3H)thymidine incorporation into hamster duct epithelium in primary culture and a rat pancreatic duct cell line but had no effect on a hamster insulinoma tumor cell line. A portion of human **INGAP** gene was cloned and appears to be highly homologous to the hamster gene. This data suggests that the **INGAP** gene is a novel pancreatic gene expressed during islet neogenesis whose protein product is a constituent of Ilotropin and is capable of initiating duct cell proliferation, a prerequisite for islet neogenesis.
ACCESSION NUMBER: 1997:273551 BIOSIS
DOCUMENT NUMBER: PREV199799565269
TITLE: Cloning and sequencing of the pancreatic islet neogenesis associated protein (**INGAP**) gene and its expression in islet neogenesis in hamsters.
AUTHOR(S): Rafaeloff, Ronit; Pittenger, Gary L.; Barlow, Scott W.;

Qin, Xiao F.; Yan, Bing; Rosenberg, Lawrence; Duguid, Wil[illegible]m P.; Vinik, Aaron I. (1)
CORPORATE SOURCE: (1) [illegible]e Diabetes Inst., 855 W. Brambl[illegible]on Ave., Norfolk, VA
23510 USA
SOURCE: Journal of Clinical Investigation, (1997) Vol. 99, No. 9, pp. 2100-2109.
ISSN: 0021-9738.
DOCUMENT TYPE: Article
LANGUAGE: English